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ABSTRACT

In a study of administrative effectiveness, a total of 103 academic department heads in four universities rated a set of 15 administrative activities as to their importance. Faculty members in the 1,333 departments used the same set of activities to rate both the importance they should be given by the department head and the effectiveness with which the head performed each during the previous twelve months. Tests of reliability revealed that faculty ratings of both importance and performance were made with reasonable internal consistency. Three tests of construct validity showed that each of the three types of ratings were made with at least minimal validity. A principal components analysis of faculty ratings of performance suggested that the department head has three major types of responsibility: personnel management, departmental planning and development, and building the department's reputation. (SW)

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Research Report #42

# ADMINISTRATIVE EFFECTIVENESS OF THE ACADEMIC DEPARTMENT HEAD:

## I. THE MEASUREMENT OF EFFECTIVENESS

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ABSTRACT

A total of 103 academic department heads in 4 universities rated a set of 15 administrative activities as to their importance. Faculty members in these departments (total N = 1333) used the same set of activities to rate both the importance they should be given by the department head and the effectiveness with which the head performed each during the previous 12 months. Tests of reliability revealed that faculty ratings of both importance and performance were made with reasonable internal consistency. Three tests of construct validity showed that each of the three types of ratings were made with at least minimal validity. A principal components analysis of faculty ratings of performance suggested that the department head has three major types of responsibility: personnel management; departmental planning and development; and building the department's reputation.

# ADMINISTRATIVE EFFECTIVENESS OF THE ACADEMIC DEPARTMENT HEAD:

## I. The Measurement of Effectiveness

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Increasingly, the academic department head has become recognized as a major determinant of institutional success. In part, this reflects the key role that departments play in determining an institution's reputation and priorities (Dressel & Reichard, 1970; Faricy, 1974). In part, it reflects the head's potential for influencing faculty effort and accomplishment (Campbell & Gregg, 1957; Patton, 1961; Dressel, Johnson, & Marcus, 1970; Copeland, 1975). There is ample reason to believe that one of the surest methods for improving the quality of a college or university would be to improve the quality of its department heads.

To do so requires, at a minimum, a dependable way to assess such quality. If this were possible, then either or both of two approaches to improvement would be available. (1) One could select department heads who clearly possess the characteristics of the effective department head; or (2) One could provide developmental experiences designed to overcome the shortcomings (and strengthen the virtues) of department heads who are already on the job.

The present investigation was designed to develop a procedure for evaluating the administrative effectiveness of department heads. Subsequent studies will examine characteristics of the effective head and extraneous factors related to effectiveness.

### Rationale

In principle, evaluation of any individual or program is appropriately concerned with the question, "To what degree were the goals and objectives of this person/program accomplished?" Since objectives are likely to vary from department to department, it is essential that a way be found which can take these individual differences into account.

Assuming that the relative importance of a given objective can be identified for each department, a method will be needed for judging how well the objective was accomplished. It will then be possible to examine simultaneously the level of performance relative to the importance of the activity. An overall evaluation index could be computed by weighting performance measures by measures of importance. Such a procedure would avoid distortions due to unusually good or poor performance on unimportant objectives.

How can the relative importance of objectives (priorities) be identified? In this study, it was assumed that the department head should have a major voice in this matter. Faculty preferences were also

considered relevant.

How can effectiveness be judged? While a number of options exist, we assumed that the ratings of departmental faculty members would provide a valid, if somewhat incomplete, basis for making this judgment.

## Procedure

### Identifying Objectives

Siever (1969) asked deans, department heads, and faculty members at two universities to rank order the importance of 12 administrative activities commonly assigned to department heads. In general, he found the three groups fairly well agreed. "Promoting good teaching", "Stimulating faculty research productivity", and "Recruiting promising faculty" were the most important; "Fund raising" and "Influencing faculty government" were the least.

McCarthy (1972) expanded Siever's work by revising several items and adding six new ones. His list of 18 functions were classified as "Departmental Representative" (5 functions), "Communicator and Staff Developer" (5 functions), "Organizer" (3 functions), and "Leader" (5 functions). The first of these resembles Roach's (1976) "Representing function"; it also has much in common with the "Management function" recognized by Aldmon (1960) and Metty (1969) and the "Administrator role" proposed by McLaughlin et. al (1975). McCarthy's second category is consistent with the communication emphases stressed by Aldmon (1960), Blaw & Scott (1963), Erickson & Pederson (1966), Scott & Spaulding (1972), and Henry (1974). It also resembles Roach's "Negotiating functions" and McLaughlin et. al.'s (1975) "Leadership role". Organizing functions have also been identified by others (c.f., Gerber, 1967; Katz and Kahn, 1969; Siever et. al., 1972), as have McCarthy's "Leadership activities" (c.f., Dressel et. al., 1970; Siever et. al., 1972; Henry, 1974; Roach, 1976).

McCarthy obtained faculty ratings of how well their department head performed each function. Two of the functions were rated with reliabilities below .60; a third function was rated as unimportant by the majority of both department heads and faculty members. Therefore, in revising McCarthy's form, Hoyt (1976) excluded those three functions. On the basis of clarifications requested by faculty raters, Hoyt also revised the wording on 3 of the remaining 15 functions.

This revised list was selected for use in the present study since it appeared to provide comprehensive coverage and had undergone considerable refinement both through practical experience and statistical analysis.

### Samples

Ratings were made by faculty members and department heads at four universities during the spring of 1976. One was a large midwestern university whose departments have regularly graduated a large number of

Ph.D's. Two others (one in the Plains, one in the East) had enrollments of over 15,000, but were more modestly involved in doctoral education. The final university was located in the South, enrolled over 10,000, and had no doctoral programs except in the field of Education. For the first and last of these, participation was mandated by University policy; for the other two, it was voluntary. Departments for which fewer than five faculty ratings were available were excluded. In all, data from 103 departments were usable; 26 from the first institution and 33, 23, and 21, respectively, from the other three. The percentage of faculty members supplying ratings ranged from 54 to 100 and averaged 82.

## Ratings

Department heads indicated the importance they assigned to each of the 15 activities. Ratings were made on a 5-point scale (1=not important; 2=only so-so; 3=fairly important; 4=quite important; 5=essential).

Faculty members made two ratings -- importance and performance. For the first, they responded to the question, "How important should each of the following activities be for your department head?" on the same 5-point scale used by the heads. Performance ratings were also made on a 5-point scale (1=poor; 2=only so-so; 3=in between; 4=good; 5=outstanding). In all instances, raters were asked to base their judgments on the previous 12-month period.

## Research Questions and Analyses

The purpose of the study was to develop a useful procedure for evaluating the administrative effectiveness of the department head. Since both "importance" and "performance" ratings were involved, it was desirable to establish the reliability and validity of each. It was also desirable, for conceptual purposes, to examine the underlying structure of the ratings. The specific approaches to these problems will be described in the section on results.

# Results

## Reliability

Two approaches were taken. First, the faculty in each of 48 departments containing at least 10 faculty members were divided into two groups of approximate equal size. The average ratings of the two groups were inter-correlated. This correlation was then adjusted by the Spearman-Brown prophecy formula to give an estimate of reliability when 13 raters were used. (The average number of ratings for all departments was 13.)

A second estimate of reliability was obtained by computing the intraclass correlation coefficient from the matrix of faculty ratings grouped by department. Ebel (1951) demonstrated that the intraclass correlation coefficient usually provides a somewhat more conservative estimate than the product-moment coefficient. Results are shown in Table 1.

INSERT TABLE 1 ABOUT HERE

Reliabilities of "Performance" ratings were generally in line with those reported by McCarthy (1972), and were considerably higher than those for "Importance". A review of the descriptive statistics suggested that the low figures for "Importance" may have been an artifact due to the restricted range (low standard deviation) of these ratings. Accordingly, standard errors of estimate were also computed, based on the split-half correlations.

How large a standard error is permissible before accuracy is unacceptably low? The answer to this question must be somewhat arbitrary. It was decided that if the 95 percent confidence interval exceeded 0.5 (5 percent of the range provided by the total scale), the rating would be deemed "inaccurate". Thus, standard errors of measurement below .26 would be considered "accurate".

Of the 15 Importance ratings, only 2 failed to meet this level of accuracy (Rating #1 and Rating #2, whose standard errors were .27 and .26 respectively). For the performance ratings, eight had standard errors of .25 or less; standard errors were .26 for Ratings #3 and #9, .27 for #15, and from .30 to .35 for Ratings 1, 2, 4, and 13.

Given these results, it can be concluded that satisfactory accuracy (in the reliability sense) was generally achieved on Importance ratings and at least marginally achieved for Performance ratings.

Validity

Three indirect tests of validity were made. The first two were concerned with faculty and department head ratings of Importance, while the third was relevant both to faculty ratings of Performance and to department head ratings of Importance.

The first test was based on inferences derived from institutional differences in doctoral productivity. It was assumed that the institution with the most active doctoral programs would attach the most importance to "Stimulates Research and Scholarly Activity" and "Facilitates Extramural Funding", while the institution offering only minimal doctoral work would give the least emphasis to these two functions. For the activities focused most directly on instruction ("Fosters Good Teaching", "Guides Curriculum Development"), it was inferred that the opposite ordering would occur (highest ratings in the non-doctoral institution; lowest in the most active doctoral institution). Accordingly, comparisons were made of the "Importance" ratings at institutions which gave noticeably different emphases to graduate education.

Results are shown in Table 2.

Table 1

Reliabilities of Faculty Ratings of Department Head Functions

(N = 103 Departments)

| Department Head Functions | Importance | | Performance | |
|---|---|---|---|---|
| | Split-Half[a] | Intraclass | Split-Half[a] | Intraclass |
| 1. Guides faculty evaluation procedures | .42 | .44 | .65 | .60 |
| 2. Rewards faculty appropriately | .39 | .50 | .64 | .51 |
| 3. Guides organization and planning | .53 | .57 | .81 | .71 |
| 4. Allocates faculty responsibilities | .64 | .65 | .60 | .55 |
| 5. Faculty recruitment | .69 | .56 | .85 | .70 |
| 6. Fosters good teaching | .72 | .54 | .79 | .66 |
| 7. Stimulates research and scholarly activity | .60 | .59 | .85 | .71 |
| 8. Guides curriculum development | .85 | .75 | .83 | .72 |
| 9. Maintains faculty morale | .74 | .57 | .89 | .81 |
| 10. Fosters faculty development | .48 | .47 | .78 | .57 |
| 11. Communicates university expectations | .75 | .60 | .72 | .61 |
| 12. Communicates department's needs | .15 | .28 | .91 | .75 |
| 13. Facilitates extramural funding | .75 | .53 | .81 | .79 |
| 14. Improves department's image | .70 | .57 | .91 | .81 |
| 15. Encourages balance among specializations | .67 | .60 | .66 | .49 |

a. Adjusted by the Spearman-Brown prophecy formula.

INSERT TABLE 2 ABOUT HERE

These data were generally consistent with theoretical expectations. Although the F test was not significant for 3 of the 10 comparisons made, the differences were all in the direction hypothesized with one minor exception. The "Composite Indices" (the sum of two research means minus the sum of the two instructional means) yielded large, highly significant differences in the expected direction.

At one of the two institutions which were "moderately productive" of Ph.D.'s, it was possible to separate doctoral awarding departments from those offering only bachelor's and/or master's degrees. There were 12 of the former and 13 of the latter. The same type of analyses were applied to these two groups on the basis of the reasoning given earlier. Results are shown in Table 3.

INSERT TABLE 3 ABOUT HERE

The findings were consistent with those reported in Table 2. For each of the 10 comparisons, the difference between the two groups of departments was in the predicted direction. Half of these were statistically significant even though the samples were extremely small.

Ratings of "Importance", whether by department heads or by faculty members, were consistent with theoretical expectations. Such findings suggest that both types of ratings possessed considerable construct validity.

A final, and more demanding, test of construct validity required correlating department head ratings of "Importance" with average faculty ratings of "Performance". These two ratings on a given activity will be positively correlated if (a) department heads identify their emphases with validity (an assumption consistent with findings previously reported), (b) the average faculty rating of "Performance" is valid, and (c) department heads tend, on the average, to be successful (make progress on their objectives). If any of these three conditions are absent, there should be no relationship between the department head's ratings of "Importance" and the faculty's independent ratings of "Performance".

Each "Importance" rating was correlated with each "Performance" rating, making a total of 225 correlations. Fifteen of these were critical; i.e., paired an "Importance" and a "Performance" rating on the same activity. The other 210 were, presumably, irrelevant, since they related importance of one activity to performance on other activities.

Table 2

Emphasis of Department Heads in "Research" and "Instructional"

Activities Among Universities Differing in Doctoral Productivity

| | Doctoral Productivity | | | |
|---|---|---|---|---|
| Dep't Head's Rating | Heavy (N=23) Mean | Moderate (N=59) Mean | Light (N=21) Mean | F |
| 6. Fostering Good Tchg. | 4.35 | 4.47 | 4.71 | 1.658 |
| 8. Guiding Curr. Dev. | 3.91 | 3.81 | 4.52 | 7.357** |
| 7. Stim. Research/Schol. | 4.52 | 4.00 | 3.81 | 4.386** |
| 13. Facil. Grants/Contracts | 3.61 | 3.37 | 3.09 | 1.492 |
| Composite (7 + 13) - (6 + 8) | -.13 | -.92 | -2.33 | 9.631** |
| Avg. Fac. Rating of Import | | | | |
| 6. Fostering Good Tchg. | 4.33 | 4.39 | 4.73 | 10.687** |
| 8. Guiding Curr. Dev. | 3.86 | 3.98 | 4.54 | 18.263** |
| 7. Stim. Research/Schol. | 4.36 | 4.17 | 3.96 | 6.906** |
| 13. Facil. Grants/Contracts | 3.76 | 3.79 | 3.72 | .253 |
| Composite (7 + 13) - (6 + 8) | -.06 | -.41 | -1.60 | 20.967** |

* $P < .05$
** $P < .01$

Table 3

Emphasis of Department Heads on "Research" and "Instructional"

Activities for "Doctoral" and "Non-Doctoral" Departments

| | Doctoral Departments (N = 13) | | Non-Doctoral Departments (N = 12) | | |
|---|---|---|---|---|---|
| Department Head Ratings | Mean | s.d. | Mean | s.d. | t |
| 6. Fostering Good Teaching | 4.30 | .48 | 4.41 | .66 | -0.47 |
| 8. Guiding Curr. Dev. | 3.23 | .72 | 3.83 | .38 | -2.55* |
| 7. Stim. Research/Schol. | 4.46 | .51 | 4.16 | .71 | 1.18 |
| 13. Facil Grants/Contracts | 3.69 | .85 | 3.33 | 1.07 | 0.92 |
| Composite (7 + 13) - (6 + 8) | -.62 | 1.39 | +.75 | 1.36 | 2.49* |
| Faculty Ratings of Importance | | | | | |
| 6. Fostering Good Tchng. | 4.27 | .34 | 4.43 | .31 | -1.25 |
| 8. Guiding Curr. Dev. | 3.77 | .53 | 4.03 | .32 | -1.41 |
| 7. Stim. Research/Schol. | 4.44 | .30 | 4.08 | .35 | 2.79** |
| 13. Facil. Grants/Contracts | 4.00 | .32 | 3.72 | .30 | 2.23** |
| Composite (7 + 13) - (6 + 8) | -.39 | .81 | +.68 | .83 | 3.22** |

* $P < .05$

** $P < .01$

Besides the question of whether or not the critical correlation was significant, it is of value to know the magnitude of the critical r relative to that of the 14 "irrelevant" correlations for a given activity. Results are summarized in Table 4.

INSERT TABLE 4 ABOUT HERE

For 9 of the 15 activities, the critical correlation was statistically significant. For 13 of the 15, the critical r exceeded the average of the "irrelevant" r's. On two activities (11. Understands and Communicates Expectations of the Campus Administration to the Faculty; and 12. Effectively Communicates the Department's Needs -- Personnel, Space, Monetary -- to the Dean), results opposite to theoretical expectations were found.

In general, the results of this study offer additional evidence of validity. Although the magnitude of the correlations was low; this was not unexpected since positive relationships depended upon the simultaneous existence of three conditions. Furthermore, the range of ratings was highly restricted. Neither heads nor faculty members used the entire range of the 5-point scales; 14 of the 15 ratings of "Importance" by the heads averaged above 3.9, while the standard deviation of "Performance" ratings by the faculty were below 0.65 for 11 of the 15 activities. The failure to achieve positive results on Activities 11 and 12 was probably due, at least in part, to the restricted range of ratings. The standard deviation of "Performance" ratings was only .48 for Activity 11, while for Activity 12 the mean "Importance" rating was 4.86 on a 5-point scale.

Structure

A final purpose of this study was to determine if the data could be used to aid in conceptualizing the administrative role of the department head. For this purpose, a principal component analysis was made of the average faculty rating of "Performance"; a Varimax rotation was applied to the solution.

"Importance" ratings were not used since (1) those by department heads probably lacked high reliability and (2) those by faculty members had extremely low standard deviations. Average ratings for each department head were used rather than individual faculty ratings in order to give each department equal weight and to reduce the impact of the halo effect through averaging.

Results are summarized in Table 5.

INSERT TABLE 5 ABOUT HERE

Table 4

Summary of Correlations Between Department Head Rating of Importance and Average Faculty Rating of Performance on 15 Administrative Functions

| | Critical r (Diagonal) | Average of Other r's | Comparison with Critical r Higher | Lower |
|---|---|---|---|---|
| 1. Guides Faculty Eval. | .08 | .02 | 3 | 11 |
| 2. Rewards Fac. Approp. | .06 | .03 | 5 | 9 |
| 3. Guides Planning | .20* | .05 | 1 | 13 |
| 4. Allocates Fac. Duties | .16* | -.02 | 0 | 14 |
| 5. Recruits Faculty | .18* | .09 | 3 | 11 |
| 6. Fosters Good Tchg. | .26* | .06 | 0 | 14 |
| 7. Stim Research/Schol. | .32* | .00 | 0 | 14 |
| 8. Guides Curr. Dev. | .32* | .04 | 0 | 14 |
| 9. Maintains Fac. Morale | .32* | .00 | 0 | 14 |
| 10. Fosters Fac. Dev. | .22* | .05 | 1 | 13 |
| 11. Commun. U. Expectancies | .00 | .07 | 12 | 2 |
| 12. Commun. Dept. Needs | -.06 | .04 | 13 | 1 |
| 13. Facil. Grants/Contracts | .26* | .04 | 0 | 14 |
| 14. Improves Dept. Image | .12 | .04 | 3 | 11 |
| 15. Encourages Balance | .14 | .07 | 3 | 11 |

* $P < .05$

Table 5

Factor Loadings for Average Faculty Performance Ratings
(N=103 Departments)
-Varimax Rotation-

| Department Head Functions | Rotated Factor Loadings for Factor: I | II | III |
|---|---|---|---|
| 2. Rewards faculty appropriately | .82 | .21 | .32 |
| 9. Maintains faculty morale | .67 | .37 | .31 |
| 4. Allocates faculty responsibilities | .64 | .47 | .15 |
| 10. Fosters faculty development | .63 | .37 | .36 |
| 1. Guides faculty evaluation procedures | .63 | .28 | .37 |
| 11. Communicates university expectations | .46 | .43 | .38 |
| 8. Guides curriculum development | .23 | .74 | .36 |
| 3. Guides organization and planning | .39 | .73 | .37 |
| 6. Fosters good teaching | .43 | .67 | .27 |
| 15. Encourages balance among specializations | .42 | .66 | .06 |
| 5. Faculty recruitment | .16 | .60 | .48 |
| 13. Facilitates extramural funding | .22 | .14 | .74 |
| 12. Communicates department's needs | .38 | .38 | .66 |
| 14. Improves department's image | .47 | .44 | .60 |
| 7. Stimulates research/scholarly activity | .44 | .31 | .55 |

| Factor | Eigenvalue | % of Variance Accounted For |
|---|---|---|
| I | 9.11 | 60.7 |
| II | 1.05 | 7.0 |
| III | .98 | 6.5 |
| Total | | 74.2 |

Three factors were derived which accounted for 74 percent of the variance. The first factor accounted for 60.7 percent of the variance; item content suggests that it be labelled "Personnel Management". The second factor included five items; they described functions which might be called "Planning and Development". The remaining factor grouped four activities whose common concern appears to be the "Department's Reputation". Although these factors do not appear to be totally independent (i. e., the items tended to load on more than one factor), they offer a helpful way to describe the department head's position.

## DISCUSSION

The investigation focused on important, but sensitive, questions. A number of limitations were created thereby. Perhaps the most important of these was our inability to standardize the conditions under which the instruments were administered. Studies of student ratings (e. g., Aleamoni & Hexner, 1973; Levy, 1976) make it clear that the conditions frequently affect outcomes; hence, our assumption that we could pool data from four institutions was probably not totally justified. Similarly, although four institutions were involved, the size of the total sample was relatively small. The institutions were not selected to represent any population, so that generalization (especially to small private institutions or to two-year colleges) would be hazardous. Despite these limitations, a number of useful conclusions can be drawn.

1. A list of department head activities has been developed which appears to cover comprehensively the responsibilities and functions cited in the literature and by practitioners.

2. These activities represent three types of concerns: personnel management, departmental planning and development, and building the department's reputation.

3. In general, faculty ratings of the relative importance of these activities and of the head's performance on them are made with acceptable reliability.

4. There is considerable evidence of construct validity for all three types of ratings (department head ratings of "Importance"; average faculty ratings of "Importance" and "Performance").

While further refinements in the instrument might improve some of its psychometric properties, it appears that, in its present form, it could provide useful evaluations of the department head's administrative effectiveness. Results could be used to provide summaries of effectiveness in three broad areas; the importance attached to specific responsibilities can be taken into account. Furthermore, by examining performance ratings in specific areas, it should be possible to construct a profile of administrative strengths and weaknesses.

The value of such a profile will be considerably enhanced if performance can be related to specific administrative techniques or approaches. Research on that problem has recently been completed and will be the subject of a subsequent report.

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